PART 70 MINOR SOURCE MODIFICATION
OFFICE OF AIR MANAGEMENT

Kobelco Metal Powder of America, Inc.
1625 Bateman Drive
Seymour, Indiana 47274

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Source Modification No.: 071-12222-00016	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

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SECTION A SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary metal powder manufacturing operation.

Responsible Official:	Michael Lutheran
Source Address:	1625 Bateman Drive, Seymour, Indiana 47274
Mailing Address:	1625 Bateman Drive, Seymour, Indiana 47274
Phone Number:	812-522-3033
SIC Code:	3311A
County Location:	Jackson
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

(a) one (1) natural gas-fired oxy-fuel burner, rated at 9.5 million British thermal units (MMBtu) per hour, to be installed in the existing electric arc furnace (ID EAF), to accelerate scrap melting, which exhausts through one (1) stack (S-6);

(b) one (1) Coherent Jet injection lance and natural gas-fired burner configuration, rated at 9.5 MMBtu per hour, to be installed in the existing electric arc furnace (ID EAF), which exhausts through one (1) stack (S-6); and

(c) two (2) new natural gas-fired burners, each rated at 18 MMBtu per hour, to be installed in each of the existing reduction/annealing furnaces (ID RF-1 and RF-2), respectively, each of which exhausts through one (1) stack (S-4 and S-5, respectively).

Note: The installation of the oxy-fuel burner and the Coherent Jet injection lance and burner in the existing electric arc furnace (ID EAF) increases the maximum liquid steel production capacity of the EAF from 7.2 tons per hour to 10 tons per hour.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Permit No Defense [IC 13]

This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions [326 IAC 2-7-1]

Terms in this approval shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

SECTION C GENERAL OPERATION CONDITIONS

C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

(a) Where specifically designated by this approval or required by an applicable requirement, any application form, report, or compliance certification submitted under this approval shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, on the attached Certification Form, with each submittal.

(c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this approval, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this approval, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM. IDEM, OAM, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this approval.

(b) Any application requesting an amendment or modification of this approval shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this approval:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

C.5 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided in this approval, all air pollution control equipment listed in this approval and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

Testing Requirements [326 IAC 2-7-6(1)]

C.6 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

(a) Compliance testing on new emission units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAM, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.7 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.8 Maintenance of Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this approval until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.

(b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.9 Pressure Gauge Specifications

Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.10 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5][326 IAC 2-7-6] [326 IAC 1-6]

(a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:

(1) This condition;

(2) The Compliance Determination Requirements in Section D of this approval;

(3) The Compliance Monitoring Requirements in Section D of this approval;

(4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this approval; and

(5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this approval. CRP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this approval by the Permittee and maintained on site, and is comprised of :

(A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this approval; and

(B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.

(b) For each compliance monitoring condition of this approval, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the approval unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.

(c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:

(1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the approval conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the approval, and such request has not been denied or;

(3) An automatic measurement was taken when the process was not operating; or

(4) The process has already returned to operating within "normal" parameters and no response steps are required.

(d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.11 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this approval exceed the level specified in any condition of this approval, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate approval conditions may be grounds for immediate revocation of the approval to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.12 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this approval shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this approval is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this approval.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.13 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this approval;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this approval, and whether a deviation from an approval condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance.

C.14 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

(a) The reports required by conditions in Section D of this approval shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) Unless otherwise specified in this approval, any notice, report, or other submission required by this approval shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

(c) Unless otherwise specified in this approval, any semi-annual report shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) The first report shall cover the period commencing on the date of issuance of this approval and ending on the last day of the reporting period.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(a) one (1) natural gas-fired oxy-fuel burner, rated at 9.5 million British thermal units (MMBtu) per hour, to be installed in the existing electric arc furnace (ID EAF), to accelerate scrap melting, which exhausts through one (1) stack (S-6); and

(b) one (1) Coherent Jet injection lance and natural gas-fired burner configuration, rated at 9.5 MMBtu per hour, to be installed in the existing electric arc furnace (ID EAF), which exhausts through one (1) stack (S-6).

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate Matter (PM) [40 CFR 60.270a, Subpart AAa] [326 IAC 12]

(a) Pursuant to 40 CFR 60.272a, Subpart AAa, and CP-071-2546-00110 (PSD Permit), issued on December 10, 1993, the Permittee shall not cause to be discharged into the atmosphere from the existing EAF (which now includes the units listed above) any gases which:

(1) exit from a control device and contain particulate matter in excess of 0.0052 gr/dscf. Particulate matter is defined as filterable particulate matter which is the particulate matter collected on, or prior to, the filter of an EPA Method 5 (or equivalent) sampling train;
(2) exit from a control device and exhibit 3 percent (%) opacity or greater; and
(3) exit from a shop and, due solely to the operations of any affected EAF(s), exhibit 6% opacity or greater.

(b) The Permittee shall not cause to be discharged into the atmosphere from the dust handling system any gases that exhibit 10 percent (10%) opacity or greater.

D.1.2 Prevention of Significant Deterioration (PSD) [326 IAC 2-2] [40 CFR 52.21] [40 CFR 52.124]

Pursuant to 326 IAC 2-2-3(2), Best Available Control Technology (BACT), as determined in CP-071-2546-00110 (PSD Permit), issued on December 10, 1993, the following shall apply to the existing EAF (which now includes the units listed above):

(a) The EAF shall be operated within the enclosure controlled by an 86,800 acfm doghouse evacuation system, ducted to a baghouse with an 85 feet tall dispersion stack. Pursuant to 326 IAC 2-2 and 6-5, the fugitive dust control and baghouse operation and maintenance program (on file with IDEM) shall be used to insure optimum compliance with the limitations contained herein.
(a) The particulate matter (PM/PM10) from the melt shop baghouse stack (S-6) shall be limited to 0.004 grains per dry standard cubic foot (gr/dscf) and 2.3 pounds per hour (10.1 tons per year).
(c) The PM/PM10 fugitive emissions generated during furnace operations shall be captured by the doghouse hood or contained within the melt shop building.
(d) The visible emissions from any building opening shall be limited to 6% opacity in any one (1) six (6) minute averaging period.

(e) Carbon monoxide (CO) emissions from the EAF shall be captured and exhausted from the EAF baghouse stack for proper dispersion. Total melt shop CO emissions shall be limited to 10.5 pounds of CO emitted per ton of metal product based on a twenty-four hour averaging period, 23 tons per month, and 8.5 pounds of CO emitted per ton of metal product based on a one month averaging period from the baghouse.

(f) Volatile Organic Compound (VOC) emissions shall be controlled through a scrap management program to minimize steel scrap with high residual oil content. Kobelco Metal Powder of America shall charge only clean scrap, consistent with the Scrap Management Program for Kobelco on file with IDEM.

These limits shall also satisfy the requirements of the NSPS, 40 CFR 60.272a, Subpart AAa.

D.1.3 Carbon Monoxide (CO)

Emissions of CO from the EAF baghouse stack shall not exceed 6.37 pounds of CO per ton of liquid steel tapped from the EAF, based on a one month averaging period. Operation of the oxy-fuel burner and the Coherent Jet injection lance and burner in conjunction with the EAF will ensure compliance with this limit.

D.1.4 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the electric arc furnace (EAF) shall not exceed 19.2 pounds per hour when operating at a process weight rate of 20,000 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for any control devices on the EAF.

Compliance Determination Requirements

D.1.6 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

During the period between 30 and 36 months after issuance of this permit, the Permittee shall perform PM and PM-10 testing on the existing EAF utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM, Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C-Performance Testing.

D.1.7 Continuous Emission Monitor (CEM) Specifications and Requirements [326 IAC 2-2]

Pursuant to CP-071-2546-00110 (PSD Permit), issued on December 10, 1993, CEM data shall be made available for carbon monoxide (CO). The CO CEM data will be certified, quality assured, and used as an indicator to determine the frequency of required stack testing and appropriate exhaust system corrections. In order for CEM compliance data to be useful, CO CEMs shall be installed, calibrated, maintained, and operated to record output, documenting compliance with the CO limitations from the electric arc furnace baghouse exhaust stack (see Conditions D.1.2 and D.1.3). Kobelco shall follow the CEM Quality Assurance Plan developed by Kobelco for the CEM equipment. A Relative Accuracy Test Audit (RATA)/Certification procedure for carbon monoxide that was performed by Kobelco is on file with IDEM. Minor changes, including the averaging time over which the relative accuracy is determined, to some aspects of 40 CFR Performance Specifications are acceptable (subject to approval), due to the nature of the process and the emission standard.

Pursuant to 40 CFR 60.273a(c), installation of a CEM system for opacity is not required because the EAF baghouse is a modular filter system. The OAM reserves the right to require installation of CO or opacity CEMs on the basis of compliance reporting submitted.

D.1.8 Particulate Matter (PM)

The doghouse evacuation system enclosure and the baghouse for PM control shall be in operation and control emissions from the electric arc furnace at all times that the electric arc furnace is in operation.

D.1.9 Monitoring

(a) Pursuant to 40 CFR 60.273a(c), observations of the opacity of the visible emissions from the electric arc furnace baghouse stack exhaust (Stack S-6) shall be performed by a certified visible emission observer as follows: Visible emission observations are conducted at least once per day when the furnace is operating in the melting and refining period. These observations shall be taken in accordance with Method 9, and, for at least three 6-minute periods, the opacity shall be recorded for any point(s) where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of the visible emissions, only one set of three 6-minute observations will be required. In this case, Method 9 observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. Records shall be maintained of any 6-minute average that is in excess of the emission limit specified in 40 CFR 60.272a(a).

(b) Pursuant to 40 CFR 60.274a(b), except as provided under 40 CFR 60.274a(d), the Permittee is required to check and record the furnace static pressure if a direct-shell evacuation control (DEC) system is in use and either (1) check and record the control system fan motor amperes and damper positions on a once-per-shift basis; or (2) install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood. Since a DEC system is not used with the EAF at this source, it is not necessary for the Permittee to check and record the furnace static pressure. However, the source has indicated that of the remaining monitoring requirements listed as (1) or (2) above, it will comply with option (2).

The EAF is totally enclosed by a doghouse type enclosure with a minimum capture efficiency of 98%. The source will install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through the doghouse enclosure (which performs the function of a hood). The monitoring device may be installed in any appropriate location in the exhaust duct of the doghouse such that reproducible flow rate monitoring will result. The flow rate monitoring device shall have an accuracy ±10 percent over its normal operating range and shall be calibrated according to the manufacturer's instructions. IDEM, OAM may require the Permittee to demonstrate the

accuracy of this monitoring device relative to Methods 1 and 2 of appendix A of 40 CFR Part 60.

(c) Pursuant to 40 CFR 60.274a(c), when the Permittee is required to demonstrate compliance with the standard under 40 CFR 60.272a(a)(3) and at any other time that IDEM, OAM may require, that either the control system fan motor amperes and all damper positions or the volumetric flow rate through each separately ducted hood shall be determined during all periods in which a hood is operated for the purpose of capturing emissions from the affected facility subject to paragraph (b)(1) or (b)(2) of 40 CFR 40.274. The Permittee may petition IDEM, OAM for reestablishment of these parameters whenever the Permittee can demonstrate to IDEM, OAM's satisfaction that the affected facility operating conditions upon which the parameters were previously established are no longer applicable. The values of these parameters as determined during the most recent demonstration of compliance shall be maintained at the appropriate level for each applicable period. Operation at other than baseline values may be subject to the requirements of 40 CFR 60.276a(c).

(d) Pursuant to 40 CFR 60.274a(d), the Permittee shall perform monthly operational status inspections of the equipment that is important to the performances of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed.

(e) Pursuant to 40 CFR 60.274a(e), the Permittee may petition IDEM, OAM to approve any alternative to monthly operational status inspections that will provide a continuous record of the operation of each emission capture system.

(f) Pursuant to 40 CFR 60.274a(h), during any performance test required under 40 CFR 60.8, and for any report thereof required by 40 CFR 60.275a(d), or to determine compliance with 40 CFR 60.272a(a)(3), the Permittee shall monitor the following information for all heats covered by the test:

(1) Charge weights and materials, and tap weights and materials;
(2) Heat times, including start and stop times, and a log of process operation, including periods of no operation during testing and the pressure inside the doghouse enclosure;
(3) Control device operation log; and
(4) Continuous monitor or Reference Method 9 data.

(g) Pursuant to 40 CFR 60.276a(a), records of the measurements required in 40 CFR 60.274a must be retained for at least 2 years following the date of the measurement.

(h) Pursuant to 40 CFR 60.276a(b), the Permittee shall submit a written report of exceedances of the control device opacity to IDEM, OAM semi-annually. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity is 3 percent or greater.

(i) Either operation of control system fan motor amperes at values exceeding ±15 percent of the value established under 40 CFR 60.274a(c) or operation at flow rates lower than those established under 40 CFR 60.274a(c) may be considered by the IDEM, OAM to be unacceptable operation and maintenance of the affected facility. Operation at such values shall be reported to IDEM, OAM semiannually.

(j) Pursuant to 40 CFR 60.276a(f), the Permittee shall conduct the demonstration of compliance with 40 CFR 60.272a(a) and furnish IDEM, OAM a written report of the results of the test.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.10 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the electric arc furnace, at least once daily when the electric arc furnace is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 and 9.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

D.1.11 Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the electric arc furnace when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.1.12 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.13 Record Keeping Requirements

(a) Pursuant to 40 CFR 60.276a(a), records of the measurements required in 40 CFR 60.274a (paragraphs (a) through (h) of Condition D.1.9) must be retained for at least 2 years following the date of the measurement.

(b) To document compliance with Condition D.1.10, the Permittee shall maintain the following:

(1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:

(A) Inlet and outlet differential static pressure.

(2) Documentation of all response steps implemented, per event .

(3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.

(4) Quality Assurance/Quality Control (QA/QC) procedures.

(5) Operator standard operating procedures (SOP).

(6) Manufacturer's specifications or its equivalent.

(7) Equipment "troubleshooting" contingency plan.

(8) Documentation of the dates vents are redirected.

(c) To document compliance with Condition D.1.11, the Permittee shall maintain records of the results of the inspections required under Condition D.1.11 and the dates the vents are redirected.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.14 Reporting Requirements

(a) Pursuant to 40 CFR 60.276a(b), the Permittee shall submit a written report of exceedances of the control device opacity to IDEM, OAM semi-annually. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity is 3 percent or greater.

(b) Either operation of control system fan motor amperes at values exceeding ±15 percent of the value established under 40 CFR 60.274a(c) or operation at flow rates lower than those established under 40 CFR 60.274a(c) may be considered by the IDEM, OAM to be unacceptable operation and maintenance of the affected facility. Operation at such values shall be reported to IDEM, OAM semiannually.

(c) Pursuant to 40 CFR 60.276a(f), the Permittee shall conduct the demonstration of compliance with 40 CFR 60.272a(a) and furnish IDEM, OAM a written report of the results of the test.

(d) Reports required pursuant to 40 CFR 60.276a should also include the following information:

(1) Calendar dates covered in the reporting period.

(2) Description of excess emissions (units of applicable standard) including:
(A) Magnitude
(B) Conversion factors used
(C) Date and time of commencement and completion
(D) Corrective and preventive action taken

(3) A description of any modifications to the CEMs that could affect the ability of the CEMs to comply with Performance Specifications 2 or 3 (included with CP-071-2546-00110 on file with IDEM).

(4) For continuous monitoring systems the following:
- (A) Date and time when system was inoperative except for zero and span value checks
- (B) Nature of system repairs or adjustments
- (C) Results of daily CEMs drift tests and quarterly accuracy assessments

(5) Lack of occurrences during a quarter including the following:
- (A) Absence of excess emissions during quarter
- (B) Absence of adjustments, repairs, or inoperativeness of continuous monitoring system

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(c) two (2) new natural gas-fired burners, each rated at 18 MMBtu per hour, to be installed in each of the existing reduction/annealing furnaces (ID RF-1 and RF-2), respectively, each of which exhausts through one (1) stack (S-4 and S-5, respectively).

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Prevention of Significant Deterioration [326 IAC 2-2] [40 CFR 52.21]

Pursuant to 326 IAC 2-2-3(2) BACT, as determined in CP-071-2546-00110, issued on December 10, 1993, and as determined pursuant to the revised BACT analysis submitted on February 3, 1999, the following shall apply to the two (2) reduction/annealing furnaces (RF-1 and RF-2):

(1) RF-1 shall burn only natural gas and shall be limited to 18.0 MMBtu per hour heat input;
(2) RF-2 shall burn only natural gas and shall be limited to 18.0 MMBtu per hour heat input;
(3) CO emissions from RF-1 shall not exceed 1.0 pounds of CO per ton of semi-finished steel powder; and
(4) CO emissions from RF-2 shall not exceed 1.0 pounds of CO per ton of semi-finished steel powder.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.2 Record Keeping Requirements

(a) To document compliance with Condition D.2.1, the Permittee shall record the amount of natural gas combusted per day.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION

PART 70 SOURCE MODIFICATION CERTIFICATION

Source Name: Kobelco Metal Powder of America, Inc.
Source Address: 1625 Bateman Drive, Seymour, Indiana 47274
Mailing Address: 1625 Bateman Drive, Seymour, Indiana 47274
Source Modification No.: 071-12222-00016

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.

Please check what document is being certified:

9 Test Result (specify) _____

9 Report (specify) _____

9 Notification (specify) _____

9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document for a Part 70 Minor Source Modification

Source Name:	Kobelco Metal Powder of America, Inc.
Source Location:	1625 Bateman Drive, Seymour, Indiana 47274
County:	Jackson
Source Modification No.:	071-12222-00016
SIC Code:	3311A
Permit Reviewer:	Trish Earls/EVP

On July 27, 2000, the Office of Air Management (OAM) had a notice published in The Tribune, Seymour, Indiana, stating that Kobelco Metal Powder of America, Inc. had applied for a Minor Source Modification to modify the existing electric arc furnace (ID EAF) and the two (2) reduction/annealing furnaces (ID RF-1 and RF-2) at their existing metal powder manufacturing operation. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On August 21, 2000, Kobelco Metal Powder of America, Inc. (Kobelco) submitted comments on the proposed permit. The summary of the comments and corresponding responses is as follows:

Comment #1

Kobelco requests that Condition D.1.3 be revised to make clear that the 6.37 pounds per ton emission factor is based on a one month averaging period.

As noted both in Kobelco's request for preconstruction approval and in the Technical Support Document prepared by IDEM, the 6.37 lb/ton emission factor is derived from the original 8.5 lb/ton emission factor and represents a 25% reduction in emissions estimated to occur as a result of the installation of the oxy-fuel burner and the coherent jet injection lance and burner (8.5 x 0.75 = 6.37). The 8.5 lb/ton emission factor is based on a one month averaging period. Therefore, to be consistent, the 6.37 lb/ton emission factor must also be based on a one month averaging period.

Accordingly, Kobelco requests that Condition D.1.3 be revised to read:

D.1.3 Carbon Monoxide (CO)

Emissions of CO from the EAF baghouse stack shall not exceed 6.37 pounds of CO per ton of liquid steel tapped from the EAF, **based on a one month averaging period**. Operation of the oxy-fuel burner and the Coherent Jet injection lance and burner in conjunction with the EAF will ensure compliance with this limit.

Response #1

Pursuant to CP-071-2546-00110, a PSD permit, issued to Kobelco on December 10, 1993, the CO emissions from the electric arc furnace (ID EAF) baghouse stack are limited to 10.5 pounds of CO emitted per ton of metal product based on a twenty-four hour averaging period, 23 tons per month, and 8.5 pounds of CO emitted per ton of metal product based on a one month averaging period. Potential

emissions are based on the long term emission factor. Since the long term emission factor of 8.5 pound of CO per ton of metal product is based on a one month averaging period, the 6.37 pound of CO per ton of metal product emission factor, derived from the long term emission factor and which accounts for the reduction in emissions that occurs from the installation of the oxy-fuel burner and the coherent jet injection lance burner, will also be specified as being based on a one month averaging period. Condition D.1.3 is revised to read as follows:

D.1.3 Carbon Monoxide (CO)

Emissions of CO from the EAF baghouse stack shall not exceed 6.37 pounds of CO per ton of liquid steel tapped from the EAF**, based on a one month averaging period**. Operation of the oxy-fuel burner and the Coherent Jet injection lance and burner in conjunction with the EAF will ensure compliance with this limit.

Upon further review, the OAM has decided to make the following additional revisions to the permit:

1. The 18 MVA transformer, which is listed in section A.2 as an emission unit, has been removed from this section because there are no emissions from this equipment and it is not considered an emission unit. This unit will be listed as an insignificant activity in the Part 70 permit that is pending with the IDEM, OAM. Section A.2 is revised to read as follows:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

(a) ~~one (1) 18 MVA transformer;~~

~~(b)~~ one (1) natural gas-fired oxy-fuel burner, rated at 9.5 million British thermal units (MMBtu) per hour, to be installed in the existing electric arc furnace (ID EAF), to accelerate scrap melting, which exhausts through one (1) stack (S-6);

~~(c)~~**(b)** one (1) Coherent Jet injection lance and natural gas-fired burner configuration, rated at 9.5 MMBtu per hour, to be installed in the existing electric arc furnace (ID EAF), which exhausts through one (1) stack (S-6); and

~~(d)~~**(c)** two (2) new natural gas-fired burners, each rated at 18 MMBtu per hour, to be installed in each of the existing reduction/annealing furnaces (ID RF-1 and RF-2), respectively, each of which exhausts through one (1) stack (S-4 and S-5, respectively).

Note: The installation of the oxy-fuel burner and the Coherent Jet injection lance and burner in the existing electric arc furnace (ID EAF) increases the maximum liquid steel production capacity of the EAF from 7.2 tons per hour to 10 tons per hour.

2. Since Kobelco is using a continuous emission monitor (CEM) to demonstrate compliance with the CO emission limits for the electric arc furnace (ID EAF) listed in conditions D.1.2 and D.1.3 of the Minor Source Modification, stack testing for CO emissions to demonstrate compliance is not necessary. Therefore, condition D.1.6 is revised to read as follows:

D.1.6 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

During the period between 30 and 36 months after issuance of this permit, the Permittee shall perform PM **and** PM-10~~, and CO~~ testing on the existing EAF utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM, Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, ~~and Method 10 (40 CFR 60, Appendix A) for CO,~~ or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of

this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a Part 70 Minor Source Modification.

Source Background and Description

Source Name:	**Kobelco Metal Powder of America, Inc.**
Source Location:	**1625 Bateman Drive, Seymour, Indiana 47274**
County:	**Jackson**
SIC Code:	**3399**
Source Modification No.:	**071-12222-00016**
Permit Reviewer:	**Trish Earls/EVP**

The Office of Air Management (OAM) has reviewed a modification application from Kobelco Metal Powder of America, Inc. relating to the construction of the following emission units and pollution control devices:

(a) one (1) 18 MVA transformer;

(b) one (1) natural gas-fired oxy-fuel burner, rated at 9.5 million British thermal units (MMBtu) per hour, to be installed in the existing electric arc furnace (ID EAF), to accelerate scrap melting, which exhausts through one (1) stack (S-6);

(c) one (1) Coherent Jet injection lance and natural gas-fired burner configuration, rated at 9.5 MMBtu per hour, to be installed in the existing electric arc furnace (ID EAF), which exhausts through one (1) stack (S-6); and

(d) two (2) new natural gas-fired burners, each rated at 18 MMBtu per hour, to be installed in each of the existing reduction/annealing furnaces (ID RF-1 and RF-2), respectively, each of which exhausts through one (1) stack (S-4 and S-5, respectively).

Note: The installation of the oxy-fuel burner and the Coherent Jet injection lance and burner in the existing electric arc furnace (ID EAF) increases the maximum liquid steel production capacity of the EAF from 7.2 tons per hour to 10 tons per hour.

History

On April 28, 2000, Kobelco Metal Powder of America, Inc. submitted an application to the OAM requesting to modify the existing electric arc furnace (ID EAF) and the two (2) reduction/annealing furnaces (ID RF-1 and RF-2) at their existing metal powder manufacturing operation. The modifications to the EAF will increase the plant's maximum liquid steel production capacity from 7.2 tons per hour to 10 tons per hour. The use of the oxy-fuel burner and the Coherent Jet is expected to reduce NOx and CO emissions from the EAF based on manufacturer's information. Kobelco Metal Powder of America, Inc. submitted a Part 70 permit application (T071-7315-00016) to IDEM, OAM on December 2, 1996.

Existing Approvals

The source applied for a Part 70 Operating Permit (T071-7315-00016) on December 2, 1996. The source has been operating under previous approvals including, but not limited to, the following:

(a) Construction Permit, PC (36) 1685, issued June 13, 1988;

(b) Operation Permit, 36-02-93-0110, issued January 25, 1989;

(c) Registration CP-071-2513-00016, issued June 1, 1992;

(d) CP-071-2546-00110 (PSD Permit), issued December 10, 1993.

All applicable conditions from previous approvals were incorporated into this Part 70 Minor Source Modification except the following conditions, which have either been removed or revised:

(a) CP-071-2546-00110 (PSD Permit), issued December 10, 1993.

Condition 10a: That only natural gas shall be burned and limited to 14.55 MMBtu/hr heat input.

Condition 11a: That only natural gas shall be burned and limited to 9.0 MMBtu/hr heat input.

These conditions were revised to reflect the new heat input ratings of each of the reduction/annealing furnaces (RF-1 and RF-2) of 18.0 MMBtu per hour.

Condition 10b: CO emissions shall not exceed 35.0 lb/MMscf of natural gas burned and 0.7 pounds per hour (3 tons/year).

Condition 11b: CO emissions shall not exceed 20 lb/MMscf of natural gas burned and 0.2 pounds per hour (0.8 tons/year).

Reason not incorporated: These conditions were based on the assumption that CO emissions from each of the reduction/annealing furnaces were generated by natural gas combustion only. Stack tests performed on the furnaces on June 30, 1998, showed that potential CO emissions from these furnaces were much higher because additional CO emissions are generated from the decarburization of the metal powder in the furnaces. Therefore, the CO emission limit will be revised through a Part 70 Significant Source Modification (SSM 071-12450-00016), which is currently being processed by the OAM, under the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration), 40 CFR 52.21, and 40 CFR 52.124, to include these additional CO emissions from decarburization. The revised limit for each furnace will be 1.0 pound of CO per ton of steel powder processed.

Condition 10c: Particulate matter from the combustion of natural gas shall not exceed 0.04 lb/hr.

Condition 11c: Particulate matter from the combustion of natural gas shall not exceed 0.03 lb/hr.

Reason not incorporated: These conditions established PM limits for the 14.55 MMBtu per hour and the 13.096 MMBtu per hour reduction/annealing furnaces (RF-1 and RF-2) based on AIRS emission factors. These conditions were not incorporated into the Part 70 Minor Source Modification because these limits were not based on the most recent emission factors and the limits are not required to meet any federal or state regulations. Also, the heat input rating for each of these furnaces is now being increased to 18.0 MMBtu per hour.

Enforcement Issue

There are no pending enforcement actions related to this modification.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
S-6	EAF Baghouse	85	6.6	101,150	212
S-4	RF-1	31.3	3.8	20,900	524
S-5	RF-2	61.7	3.8	37,150	322

Recommendation

The staff recommends to the Commissioner that the Part 70 Minor Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on April 28, 2000.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (seven (7) pages).

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	13.16
PM-10	9.87
SO_2	0.88
VOC	3.01
CO	81.55
NO_x	11.09

HAP's	Potential To Emit (tons/year)
Lead	Less than 10
Manganese	Less than 10
TOTAL	Less than 25

Note: Since this is a PSD source, the emissions increase listed above represents the future potential emissions minus the average actual emissions from the last two years, 1998 and 1999.

Justification for Modification

The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM, PM10, and NOx are greater than 5 tons per year and less than 25 tons per year. The potential to emit of CO is greater than 25 tons per year and less than 100 tons per year. Therefore, the Part 70 Operating source is being modified through a Part 70 Minor Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(e).

Although a public comment period is not required for Part 70 Minor Source Modifications, there will be a public notice period for this permit due to the nature of the changes involved for this source.

County Attainment Status

The source is located in Jackson County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Jackson County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Jackson County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	less than 100
PM-10	less than 100
SO_2	less than 100
VOC	less than 100
CO	greater than 100
NOx	less than 100

(a) This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the 28 listed source categories.

(b) These emissions are based upon the pending Title V application (T071-7315-00016) received by IDEM, OAM on December 2, 1996.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit* (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
Future Potential Emissions EAF**	13.28	9.78	2.24	6.14	279.01	4.38	0.06
Average Actual Emissions EAF	1.97	1.19	1.43	3.72	220.25	2.86	0.01
RF-1 and RF-2 Future Potential Emissions	1.18	1.18	0.10	0.84	48.18	19.89	0.29
RF-1 and RF-2 Average Actual Emissions	0.46	0.46	0.04	0.33	26.26	11.35	0.11
Insignificant Activities	1.13	0.55	0.01	0.08	0.87	1.03	0.0
Total	13.16	9.86	0.88	3.01	81.55	11.09	0.23
PSD Significant Threshold	25	15	40	40	100	40	N/A

* Note: Potential emissions for all facilities are the future potential emissions minus the average actual emissions for the past two years (1998 and 1999).
** Future potential PM emissions from EAF represent the maximum allowable PM emission rate of 2.3 lbs/hr pursuant to CP-071-2546-00110, issued December 10, 1993 plus emissions from new oxy-fuel and Coherent Jet burners plus fugitive emissions.

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

(a) The existing electric arc furnace (EAF) is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.270a through 276a, Subpart AAa). This rule was already applicable to the EAF prior to this modification. Pursuant to this rule, the Permittee shall not cause to be discharged into the atmosphere from the EAF any gases which: (1) exit from a control device and contain particulate matter in excess of 0.0052 gr/dscf; (2) exit from a control device and exhibit 3 percent opacity or greater; and (3) exit from a shop and, due solely to the operations of any affected EAF(s), exhibit 6 percent opacity or greater. Also, the Permittee shall not cause to be discharged into the atmosphere from the dust handling system any gases that exhibit 10 percent opacity or greater.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this proposed modification.

State Rule Applicability - Individual Facilities

326 IAC 2-2 (Prevention of Significant Deterioration)

This existing source is subject to the requirements of 326 IAC 2-2 (PSD), 40 CFR 52.21, and 40 CFR 52.124, because it is one of the twenty eight (28) listed source categories and the potential CO emissions after control are greater than 100 tons per year. Pursuant to this rule, this source was issued a PSD permit (CP-071-2546-00110) on December 10, 1993. The CO emission limits listed in Operation Conditions 10b and 11b of the PSD permit for the two (2) reduction/annealing furnaces (RF-1 and RF-2) were based on the assumption that CO emissions from each of the reduction/annealing furnaces were generated by natural gas combustion only. Stack tests performed on the furnaces on June 30, 1998, showed that potential CO emissions from these furnaces were much higher because additional CO emissions are generated from the decarburization of the metal powder in the furnaces. Therefore, the CO emission limit will be revised through a separate Part 70 Significant Source Modification (SSM 071-12450-00016), which is currently being processed by the OAM, under the requirements of 326 IAC 2-2 (PSD), 40 CFR 52.21, and 40 CFR 52.124, to include these additional CO emissions from decarburization. The revised limit for each furnace is 1.0 pound of CO per ton of steel powder processed.

The PSD emission limits established in the PSD permit for the existing electric arc furnace (ID EAF) of 0.004 gr/dscf for PM and PM10 and 8.5 pounds per ton of metal product for CO, remain unchanged. The modification to the EAF does not change any of the existing emission limits. However, the installation of the oxy-fuel burner and the Coherent Jet injection lance and burner in the existing EAF is expected to reduce NOx and CO emissions from the EAF based on manufacturer's information. A 25% reduction in emissions was conservatively estimated. Therefore, the emission factor used to calculate future potential CO emissions from the EAF was changed from 8.5 pounds of CO per ton of metal product to 6.37 pounds of CO per ton of metal product.

This modification is not subject to the requirements of this rule because the future potential emissions minus the past actual emissions are less than the PSD significant source modification thresholds as shown on page 5 above.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-3-2 (Process Operations)

(a) The PM emissions from the electric arc furnace (EAF) shall be limited to 19.2 pounds per hour, based on a process weight rate of 10.0 tons per hour. The baghouse shall be in operation at all times the EAF is in operation, in order to comply with this limit.

(b) The PM emissions from each of the two (2) reduction/annealing furnaces (RF-1 and RF-2) shall be limited to 13.6 and 12.1 pounds per hour, respectively, based on process weight rates of 6.0 and 5.0 tons per hour, respectively. The potential PM emissions from RF-1 are 0.59 tons per year and potential PM emissions from RF-2 are 0.59 tons per year, therefore, these units are in compliance with these limits.

These emission limits were calculated using the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

326 IAC 9-1 (Carbon Monoxide Emission Rules)

The electric arc furnace (EAF) is not subject to the requirements of 326 IAC 9-1. This rule only limits CO emissions from petroleum refining operations, ferrous metal smelters, and refuse incineration and burning equipment. Kobelco does not perform any of these operations. The EAF at this source is not a ferrous metal smelter. Iron ore or direct iron ore derivatives are not added to the EAF. Only steel scrap is added to the EAF where it is melted, not smelted. Since the EAF does not meet the definition of a ferrous metal smelter, this rule does not apply.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will

arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

1. The electric arc furnace (EAF) has applicable compliance monitoring conditions as specified below:

   (a) Pursuant to 40 CFR 273a(c), observations of the opacity of the visible emissions from the electric arc furnace baghouse stack exhaust (Stack S-6) shall be performed by a certified visible emission observer as follows: Visible emission observations are conducted at least once per day when the furnace is operating in the melting and refining period. These observations shall be taken in accordance with Method 9, and, for at least three 6-minute periods, the opacity shall be recorded for any point(s) where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of the visible emissions, only one set of three 6-minute observations will be required. In this case, Method 9 observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. Records shall be maintained of any 6-minute average that is in excess of the emission limit specified in 40 CFR 60.272a(a).

   (b) Pursuant to 40 CFR 274a(b), the Permittee is required to check and record the furnace static pressure if a direct-shell evacuation control (DEC) system is in use and either (1) check and record the control system fan motor amperes and damper positions on a once-per-shift basis; or (2) install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood. Since a DEC system is not used with the EAF at this source, it is not necessary for the Permittee to check and record the furnace static pressure. However, the source has indicated that of the remaining monitoring requirements listed as (1) or (2) above, it will comply with option (2).

   The EAF is totally enclosed by a doghouse type enclosure with a minimum capture efficiency of 98%. The source will install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through the doghouse enclosure (which performs the function of a hood). The monitoring device may be installed in any appropriate location in the exhaust duct of the doghouse such that reproducible flow rate monitoring will result. The flow rate monitoring device shall have an accuracy ±10 percent over its normal operating range and shall be calibrated according to the manufacturer's instructions. IDEM, OAM may require the Permittee to demonstrate the accuracy of this monitoring device relative to Methods 1 and 2 of appendix A of 40 CFR Part 60.

   (c) Pursuant to 40 CFR 60.274a(c), when the Permittee is required to demonstrate compliance with the standard under 40 CFR 60.272a(a)(3) and at any other time that IDEM, OAM may require, that either the control system fan motor amperes and all damper positions or the volumetric flow rate through each separately ducted hood shall be determined during all periods in which a hood is operated for the purpose of capturing emissions from the affected facility subject to paragraph (b)(1) or (b)(2) of 40 CFR 40.274.

   (d) Pursuant to 40 CFR 60.274a(d), the Permittee shall perform monthly operational status inspections of the equipment that is important to the performances of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall included observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed.

(e) Pursuant to 40 CFR 60.274a(h), during any performance test required under 40 CFR 60.8, and for any report thereof required by 40 CFR 60.275a(d), or to determine compliance with 40 CFR 60.272a(a)(3), the Permittee shall monitor the following information for all heats covered by the test:

(1) Charge weights and materials, and tap weights and materials;
(2) Heat times, including start and stop times, and a log of process operation, including periods of no operation during testing and the pressure inside the doghouse enclosure;
(3) Control device operation log; and
(4) Continuous monitor or Reference Method 9 data.

(f) Pursuant to 40 CFR 60.276a(a), records of the measurements required in 40 CFR 60.274a must be retained for at least 2 years following the date of the measurement.

(g) Pursuant to 40 CFR 60.276a(b), the Permittee shall submit a written report of exceedances of the control device opacity to IDEM, OAM semi-annually. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity is 3 percent or greater.

(h) Either operation of control system fan motor amperes at values exceeding ±15 percent of the value established under 40 CFR 60.274a(c) or operation at flow rates lower than those established under 40 CFR 60.274a(c) may be considered by the IDEM, OAM to be unacceptable operation and maintenance of the affected facility. Operation at such values shall be reported to IDEM, OAM semiannually.

(i) Pursuant to 40 CFR 60.276a(f), the Permittee shall conduct the demonstration of compliance with 40 CFR 60.272a(a) and furnish IDEM, OAM a written report of the results of the test.

(j) The Permittee shall record the total static pressure drop across the baghouse controlling the electric arc furnace at least once daily when the electric arc furnace is in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 to 9.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

These monitoring conditions are necessary because the electric arc furnace must be in compliance with 40 CFR 60.270a through 276a, Subpart AAa, and because the baghouse and doghouse enclosure for the furnace must operate properly to ensure compliance with 40 CFR 60.270a through 276a, Subpart AAa, 326 IAC 6-3 (Process Operations) and 326 IAC 2-7 (Part 70).

2. The two (2) natural gas fired reduction/annealing furnaces (RAF #1 and RAF #2) have applicable compliance monitoring conditions as specified below:

(a) A record of the amount of natural gas combusted each day shall be maintained for the two (2) reduction/annealing furnaces.

These monitoring conditions are necessary to ensure that the two (2)

reduction/annealing furnaces are in compliance with 326 IAC 2-7 (Part 70).

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 071-12222-00016.

Appendix A: Emission Calculations Summary

Company Name: Kobelco Metal Powder of America, Inc.
Address City IN Zip: 1625 Bateman Drive, Seymour, Indiana 47274
Source Modification No.: 071-12222
Plt ID: 071-00016
Reviewer: Trish Earls
Date: April 28, 2000

Emissions Increase from Modification (tons/year)

	Emissions Generating Activity							
Pollutant	Electric Arc Furnace Future Potential Emissions	Electric Arc Furnace Current Actual Emissions	RF-1 and RF-2 Future Potential Emissions	RF-1 and RF-2 Current Actual Emissions	Oxy-Fuel Burner and Coherent Jet Burner Potential Emissions	Insignificant Activities Future Potential Emissions	Insignificant Activities Current Actual Emissions	**TOTAL**
PM	12.66	1.97	1.18	0.46	0.62	3.23	2.10	13.16
PM10	9.16	1.19	1.18	0.46	0.62	1.64	1.09	9.87
SO2	2.19	1.43	0.10	0.04	0.05	0.02	0.01	0.88
NOx	4.38	2.86	19.89	11.35	0.00	3.41	2.38	11.09
VOC	5.69	3.72	0.84	0.33	0.45	0.27	0.19	3.01
CO	279.01	220.25	48.18	26.26	0.00	2.87	2.00	81.55
total HAPs	0.04	0.01	0.29	0.11	0.02	0.00	0.00	0.23
worst case single HAP	Lead 0.04	Lead 0.01	Hexane 0.28	Hexane 0.11	Hexane 0.02	0.00	0.00	0.19

Total emissions based on rated capacity at 8,760 hours/year. Since this is a PSD source, total emissions are equivalent to the future potential emissions minus the average actual emissions from the last two years, 1998 and 1999.
EAF future potential emissions include fugitive PM and PM10 emissions.
EAF actual emissions based on average steel production during 1998 and 1999.
RF-1 and RF-2 actual emissions based on average steel throughputs during 1998 and 1999.
Future potential emissions from insignificant activities are the emissions resulting from the modifications to the EAF.
Insignificant activity actual emissions based on average steel production and slag generation during 1998 and 1999.

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Address City IN Zip: 1625 Bateman Drive, Seymour, Indiana 47274
Source Modification No.: 071-12222
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Date: April 28, 2000

Electric Arc Furnace (EAF)

TYPE OF MATERIAL	Throughput LBS/HR	Throughput TON/HR	Control Device:	Baghouse S-6
			Control Efficiency:	99.9%
Liquid Steel	20000	10		

	PM lbs/ton metal product	PM10 lbs/ton metal product	SOx lbs/ton metal product	NOx lbs/ton metal product	VOC lbs/ton metal product	CO lbs/ton metal product	Lead** lbs/ton metal product	Manganese** lbs/ton metal product
	N/A	N/A	0.05	0.10	0.13	6.37	N/A	N/A
Potential Emissions lbs/hr	2.30	1.75	0.50	1.00	1.30	63.70	2.3E-04	9.2E-03
Potential Emissions lbs/day	55.20	41.95	12.00	24.00	31.20	1528.80	5.5E-03	2.2E-01
Potential Emissions tons/year	**10.07**	**7.66**	**2.19**	**4.38**	**5.69**	**279.01**	**1.0E-03**	**4.0E-02**

Notes:
PM emissions based on maximum allowable PM limit of 2.3 lbs/hr from PSD permit CP-071-2546-00110, issued December 10, 1993. PM10 emissions based on PM10 to PM ratio of 0.76 lbs PM10/lb PM from USEPA's AP-42, section 12.5, Table 12.5-2. PM and PM10 emissions are afte
NOx emission factor from USEPA's AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants (AIRS), September 1989.
SO2 and VOC emissions factors based on stack test data.
CO emission factor based on maximum allowable CO emission limit of 8.5 lb CO per ton metal product from PSD permit CP-071-2546-00110, issued on December 10, 1993. Based on manufacturer's data, CO emissions from the EAF will be reduced by at least 25% due to installation of oxy-fuel burner and Coherent Jet on the EAF. Therefore, the new emission limit for CO from the EAF will by (8.5 * 0.75) = 6.37 lbs CO/ton metal product.
Lead and Manganese emissions based on weight percents of each constituent in the EAF dust. Weight percents were obtained from EAF dust analyses results. Emissions are calculated by multiplying the weight percent of the constituent in the dust by the PM emissions.

Reduction/Annealing Furnace #1

TYPE OF MATERIAL	Throughput LBS/HR	Throughput TON/HR	Control Device:	N/A
			Control Efficiency:	N/A
Semi-Finished Steel Powder	12000	6.0		

	PM lbs/ton metal charged	PM10 lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged	Lead lbs/ton metal charged	
	N/A	N/A	N/A	N/A	N/A	1.00	N/A	
Potential Emissions lbs/hr	0.0	0.0	0.0	0.0	0.0	6.00	0.0	
Potential Emissions lbs/day	0.0	0.0	0.0	0.0	0.0	144.00	0.0	
Potential Emissions tons/year	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**26.28**	**0.0**	

Notes:
See Appendix A, page 4, for PM, PM10, NOx, and SOx emission calculations.
The CO emission factor is based on stack tests performed on the furnace on June 30, 1998, and represents emissions from natural gas combustion and decarburization of the steel powder.

Reduction/Annealing Furnace #2

TYPE OF MATERIAL	Throughput LBS/HR	Throughput TON/HR	Control Device:	N/A
			Control Efficiency:	N/A
Semi-Finished Steel Powder	10000	5.0		

	PM lbs/ton metal charged	PM10 lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged	Lead lbs/ton metal charged	
	N/A	N/A	N/A	N/A	N/A	1.00	N/A	
Potential Emissions lbs/hr	0.0	0.0	0.0	0.0	0.0	5.00	0.0	
Potential Emissions lbs/day	0.0	0.0	0.0	0.0	0.0	120.00	0.0	
Potential Emissions tons/year	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**21.90**	**0.0**	

Notes:
See Appendix A, page 5, for PM, PM10, NOx, and SOx emission calculations.
The CO emission factor is based on stack tests performed on the furnace on June 30, 1998, and represents emissions from natural gas combustion and decarburization of the steel powder.

Company Name: Kobelco Metal Powder of America, Inc.
Address City IN Zip: 1625 Bateman Drive, Seymour, Indiana 47274
Source Modification No.: 071-12222
Plt ID: 071-00016
Reviewer: Trish Earls
Date: April 28, 2000

Electric Arc Furnace (EAF)

TYPE OF MATERIAL	Average Actual Throughput for 1998 and 1999 LBS/YR	TON/YR	Control Device:	Baghouse S-6
			Control Efficiency:	99.9%
Liquid Steel	114413400	57,206.7		

	PM lbs/ton metal product N/A	PM10 lbs/ton metal product N/A	SOx lbs/ton metal product 0.05	NOx lbs/ton metal product 0.10	VOC lbs/ton metal product 0.13	CO lbs/ton metal product 7.70	Lead** lbs/ton metal product N/A	Manganese** lbs/ton metal product N/A
Actual Emissions lbs/hr	0.45	0.27	0.33	0.65	0.85	50.28	4.5E-05	1.8E-03
Actual Emissions lbs/day	10.79	6.52	7.84	15.67	20.37	1206.83	1.1E-03	4.3E-02
Actual Emissions tons/year	**1.97**	**1.19**	**1.43**	**2.86**	**3.72**	**220.25**	**2.0E-04**	**7.9E-03**

Notes:
Actual PM and PM10 emissions based on average steel production and the average dust catch during 1998 and 1999.
NOx emission factor from USEPA's AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants (AIRS), September 1989.
SO2 and VOC emissions factors based on stack test data.
CO emission factor based on continuous emissions monitoring system data for the first calendar quarter of the year 2000 and represents the mean daily average CO concentration.
Lead and Manganese emissions based on weight percents of each constituent in the EAF dust. Weight percents were obtained from EAF dust analyses results. Emissions are calculated by multiplying the weight percent of the constituent in the dust by the PM emissions.

Reduction/Annealing Furnace #1

TYPE OF MATERIAL	Average Actual Throughput for 1998 and 1999 LBS/YR	TON/YR	Control Device:	N/A
			Control Efficiency:	N/A
Semi-Finished Steel Powder	56050000	28,025		

	PM lbs/ton metal charged N/A	PM10 lbs/ton metal charged N/A	SOx lbs/ton metal charged N/A	NOx lbs/ton metal charged N/A	VOC lbs/ton metal charged N/A	CO lbs/ton metal charged 0.347	Lead lbs/ton metal charged N/A	
Actual Emissions lbs/hr	0.0	0.0	0.0	0.0	0.0	1.11	0.0	
Actual Emissions lbs/day	0.0	0.0	0.0	0.0	0.0	26.64	0.0	
Actual Emissions tons/year	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**4.86**	**0.0**	

Notes:
See Appendix A, page 4, for PM, PM10, NOx, and SOx emission calculations.
The CO emission factor is based on stack tests performed on the furnace on June 30, 1998, and represents emissions from natural gas combustion and decarburization of the steel powder.

Reduction/Annealing Furnace #2

TYPE OF MATERIAL	Average Actual Throughput for 1998 and 1999 LBS/YR	TON/YR	Control Device:	N/A
			Control Efficiency:	N/A
Semi-Finished Steel Powder	56958000	28,479		

	PM lbs/ton metal charged N/A	PM10 lbs/ton metal charged N/A	SOx lbs/ton metal charged N/A	NOx lbs/ton metal charged N/A	VOC lbs/ton metal charged N/A	CO lbs/ton metal charged 1.503	Lead lbs/ton metal charged N/A	
Actual Emissions lbs/hr	0.0	0.0	0.0	0.0	0.0	4.89	0.0	
Actual Emissions lbs/day	0.0	0.0	0.0	0.0	0.0	117.27	0.0	
Actual Emissions tons/year	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**21.40**	**0.0**	

Notes:
See Appendix A, page 5, for PM, PM10, NOx, and SOx emission calculations.
The CO emission factor is based on stack tests performed on the furnace on June 30, 1998, and represents emissions from natural gas combustion and decarburization of the steel powder.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Kobelco Metal Powder of America, Inc.
Address City IN Zip: 1625 Bateman Drive, Seymour, Indiana 47274
Source Modification No.: 071-12222
Plt ID: 071-00016
Reviewer: Trish Earls
Date: April 28, 2000

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Avg. Actual Throughput for 1998 and 1999 MMCF/yr
18.0	154.3	65.9

one (1) Reduction/Annealing Furnace (RF-1), rated at 18.0 MMBtu per hour.

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	99.96 *see below	5.5	N/A
Potential Emission in tons/yr	0.59	0.59	0.05	7.71	0.42	N/A
Actual Emissions in tons/yr	0.25	0.25	0.02	9.09	0.18	N/A

*NOx Emission Factor from burner manufacturer specifications. For actual emissions, an emission factor of 275.9 lb/MMCF was used based on manufacturer specifications prior to this modification.
See Appendix A, page 2, for CO emission calculations from RF-1. See page 3 for actual CO emissions calculations.

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,022 MMBtu
Actual Throughput is based on natural gas consumption rates for 1998 and 1999.
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
See page 5 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Kobelco Metal Powder of America, Inc.
Address City IN Zip: 1625 Bateman Drive, Seymour, Indiana 47274
Source Modification No.: 071-12222
Plt ID: 071-00016
Reviewer: Trish Earls
Date: April 28, 2000

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Avg. Actual Throughput for 1998 and 1999 MMCF/yr
18.0	154.3	55.2

one (1) Reduction/Annealing Furnace (RF-2), rated at 18.0 MMBtu per hour.

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	157.83 *see below	5.5	N/A
Potential Emission in tons/yr	0.59	0.59	0.05	12.18	0.42	N/A
Actual Emissions in tons/yr	0.21	0.21	0.02	2.26	0.15	N/A

*NOx Emission Factor from burner manufacturer specifications. For actual emissions, an emission factor of 81.8 lb/MMCF was used based on manufacturer specifications prior to this modification.
See Appendix A, page 2, for CO emission calculations from RF-2. See page 3 for actual CO emissions calculations.

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,022 MMBtu
Actual Throughput is based on natural gas consumption rates for 1998 and 1999.
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
See page 5 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: Kobelco Metal Powder of America, Inc.
Address City IN Zip: 1625 Bateman Drive, Seymour, Indiana 47274
Source Modification No.: 071-12222
Plt ID: 071-00016
Reviewer: Trish Earls
Date: April 28, 2000

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	3.440E-04	1.965E-04	1.228E-02	2.948E-01	5.569E-04
Actual Emissions for RF-1 and RF-2 in tons/yr	1.272E-04	7.270E-05	4.544E-03	1.090E-01	2.060E-04

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	8.189E-05	1.802E-04	2.293E-04	6.224E-05	3.440E-04
Actual Emissions for RF-1 and RF-2 in tons/yr	3.029E-05	6.664E-05	8.481E-05	2.302E-05	1.272E-04

Methodology is the same as page 4.

Potential emissions represent emissions from EAF, RF-1 and RF-2.
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Kobelco Metal Powder of America, Inc.
Address City IN Zip: 1625 Bateman Drive, Seymour, Indiana 47274
Source Modification No.: 071-12222
Plt ID: 071-00016
Reviewer: Trish Earls
Date: April 28, 2000

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
19.0	162.9

one (1) Oxy-Fuel burner, rated at 9.5 MMBtu/hr and one (1) Coherent Jet burner, rated at 9.5 MMBtu/hr.

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	N/A	5.5	N/A
Potential Emission in tons/yr	0.62	0.62	0.05	0.00	0.45	0.00

NOx and CO emissions were not included because use of this equipment is expected to result in decreases of the emissions of these two pollutants from the EAF.

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,022 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton